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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/722,217

11/25/2003

Jiafu Fang

TS6737 (US)

6793

23632 7590 03/08/2007
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EXAMINER

CAMERON, ERMA C

ART UNIT

PAPER NUMBER

1762

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/08/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/722,217

Applicant(s)

FANG, JIAFU

Examiner

Erma Cameron

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS; WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-34 is/are pending in the application.
- 4a) Of the above claim(s) 5-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4, 25-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's arguments filed 12/5/2005 and 1/17/2006 have been fully considered but they are not persuasive.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 25 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

“not pre-treated to functionalize or polarize said film-forming polymer liquid dispersion” is new matter that was not in the specification as filed. The specification as filed read “not pre-treated to functionalize or polarize the elastomers on the tire surface”.

The applicant is requested to remove new matter.

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4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1, 4 and 25-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) Claims 1, 26, 29 and 33: it is not clear why “copolymers” in lines 5 or 6 of each of these claims is in the plural. It is not clear if more than one copolymer is required in each claim.

b) Claim 1, 29 and 33: glossy has not been defined, and is therefore vague. How glossy must the coating be? The applicant says that glossy means smooth and shining, but this does not adequately define the term.

Claim Objections

6. Claim 4 is objected to because of the following informalities: spelling of sil(i)cone. Appropriate correction is required.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 4 and 25-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patitsas et al (5149591).

'591 teaches coating a water dispersion of polyurethane on a tire to form a protective dry film coating (1:8-5:48). The coating formulation may contain defoamer and other additives (see Example 3). The defoamer is identified as a paraffin oil based material, i.e. a non-silicone defoamer. There is no functionalizing pretreatment of the tire.

'591 does not teach the tensile strength of the coating, but does teach that the coating should be humidity resistant and abrasion resistant. Because polyurethane is used in both the '591 process and applicant's process, and because the end result of each coating is a coating that is resilient and is used on a tire, the tensile strength of the coatings are expected to at least overlap.

9. Claims 1, 4 and 25-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 64-000171.

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'171 teaches a lustering and protecting coating for tires that is a dispersion of urethane or other polymers in water (or other solvents) (see Abstracts and translation).

Silicone oils may be used with the polymers (see pages 3 and 4 of translation). It appears that the silicone oil would act as a defoamer.

'171 does not teach that the tensile strength is >500psi, but does teach that the coating should be water resistant. Because both applicant's coating and the coating of '171 are used on tires, which are known to experience deformation during use and delamination problems, and because both applicant and '171 use urethane coatings, it is expected that the tensile strength of the '171 coating and applicant's coating would at least overlap.

10. Claims 1, 4 and 26-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO01/94453 taken in view of Patitsas et al (5149591).

'453 teaches applying an aqueous dispersion of polyurethane to a tire as an ozone protectant (see abstract; US 2003/0127170 may serve as translation of WO 01/94553).

'453 teaches that the coating must be flexible and be able to withstand all the deformations experienced by tires [0013], as well as pass certain endurance tests [0046-0050], but does not teach that the tensile strength is >500psi.

Because both applicant's coating and the coating of '453 are used on tires, which are known to experience deformation during use and delamination problems, and because both applicant and '453 use urethane coatings, it is expected that the tensile strength of the '453 coating and applicant's coating would at least overlap.

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'453 does not teach an antifoaming agent.

'591 teaches that a defoamer such as a paraffin oil-based material is a conventional additive to a polyurethane coating used on a tire (see Example 3).

It would have been obvious to one of ordinary skill in the art to have incorporated the defoamer of '591 into the '453 coating composition because of the teaching of '591 that such an additive is conventional in a polyurethane coating used on a tire.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erma Cameron whose telephone number is 571-272-1416. The examiner can normally be reached on 8:30-6:00, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Erma Cameron

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Erma Cameron
ERMA CAMERON
PRIMARY EXAMINER

Primary Examiner
Art Unit 1762

March 3, 2007